4.5 PLANTING GUIDELINES AND PLANT LIST

NATIVE VEGETATION AND PLANTING

Much of the land through which trails will pass is covered with native vegetation. The ridges are carpeted with grasses and wildflowers. The creeks and valley bottoms are lined with dense riparian vegetation. Together these plant communities create a diverse environment and provide important wildlife habitat. The creeks and other open space areas are crucial corridors for wildlife habitat, particularly with the amount of development that is occurring in the region.

When building trails, native vegetation must be preserved to the greatest extent possible. Clearing of vegetation for trails should be minimized. Trails should be located to prevent adverse impacts to significant trees or rare plants. Along the creeks, the riparian vegetation slows creek bank erosion and protects adjacent property.

In some areas, it will be necessary to clear vegetation for a trail. In other areas native vegetation is absent, usually cleared for creek widening. Planting of native species can be used in these areas to restore a native plant community. Once established, native plants are better suited to survive in Morgan Hill's climate.

PLANT LIST & RESOURCES

The City of Morgan Hill does not currently have a list of approved plants for trail conditions. Native plants are recommended in all open space areas. For a list of approved street trees, contact the City of Morgan Hill. The Water Resource Protection Collaborative between the cities of Santa Clara County is a helpful agency for identifying plants and further resources.

The following books are current helpful references for trail situations:

- Water Use Classificaton of Landscape Species (WUCOLS Guide)
- EBMUD's Plants and Landscapes for Summer-Dry Climates of the San Francisco Bay Region.

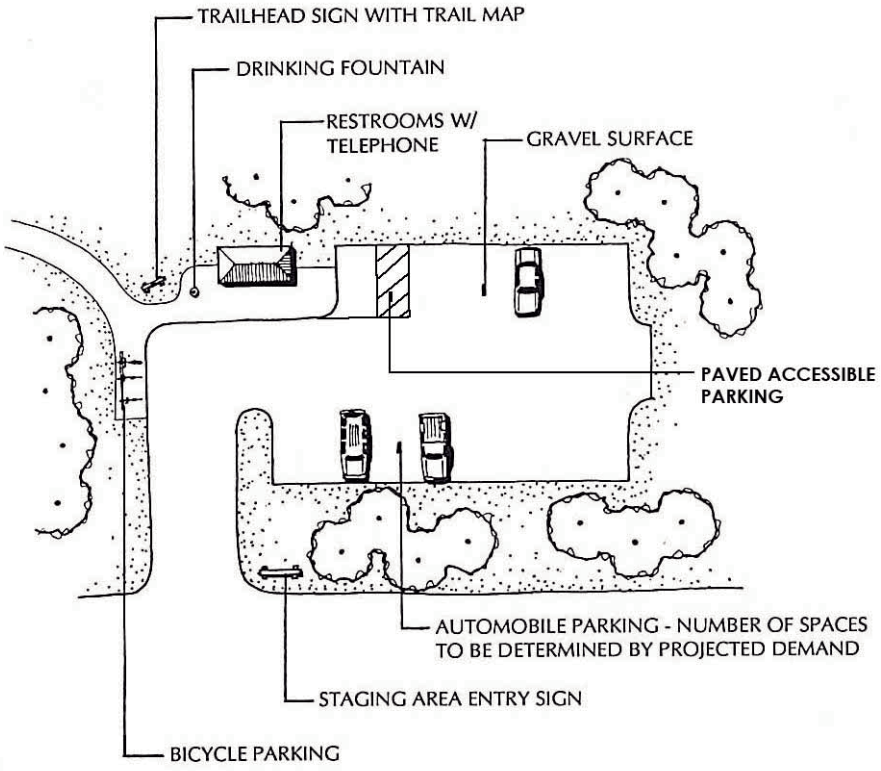
4.6 STAGING AREAS

Staging areas provide parking and other facilities for trail users. A staging area may provide, in addition to automobile parking, parking for vehicles with horse trailers, bicycle parking, restrooms, a drinking fountain, a public telephone, a water trough, hitching post for horses, and a trailhead sign with a map of the trail system. Staging areas providing access to open space trails should contain equestrian facilities where possible. A staging area may be part of an existing facility, such as a park or school, and contain only a trail sign. Agreements with the school district should be pursued to permit the use of portions of existing school parking lots as staffing areas. Where possible, this agreement may also permit use of restroom facilities.

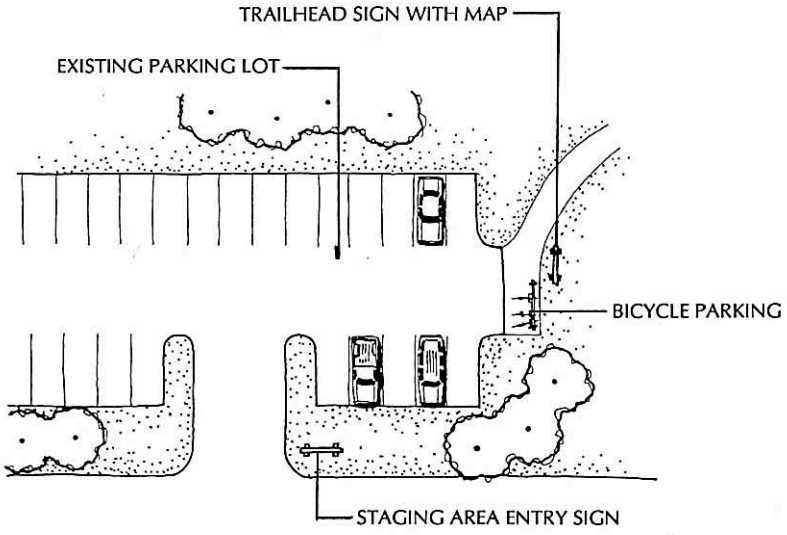
Staging areas should be located at trail end points and at key access points along the trail. The number of parking spaces should be determined by projected demand and by the permitted uses planned for a trail.

There are two types of staging areas discussed in this plan: typical staging areas and staging areas using school parking lots. A typical staging area will provide automobile and bicycle parking, and a trailhead sign with map. Restrooms and a drinking fountain may also be provided depending on need and availability of utilities. Restrooms can be portable self-contained toilets, pit toilets, or flush toilets in restrooms with running water.

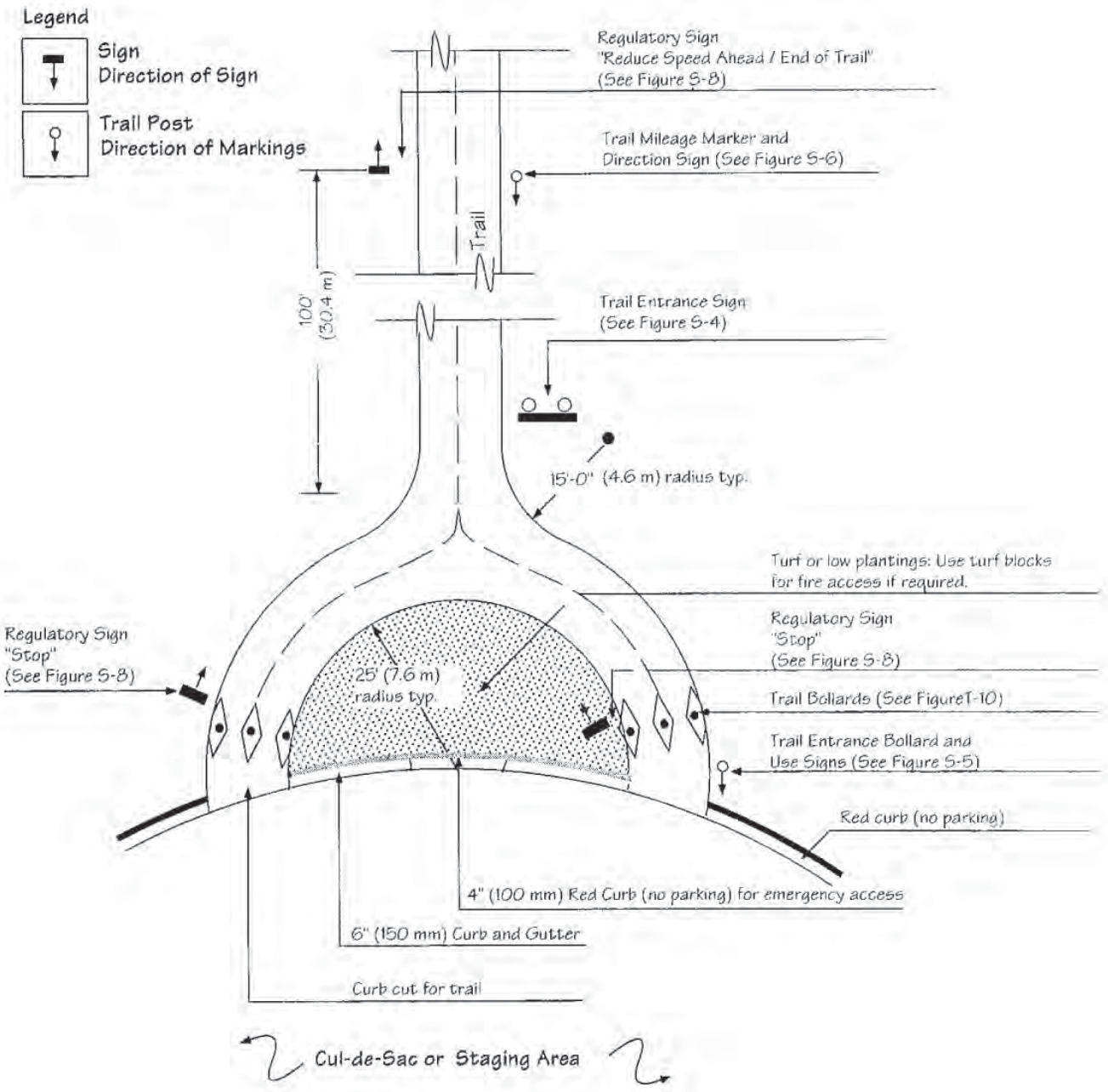
TYPICAL STAGING AREA



TYPICAL STAGING AREA IN SCHOOL PARKING LOT

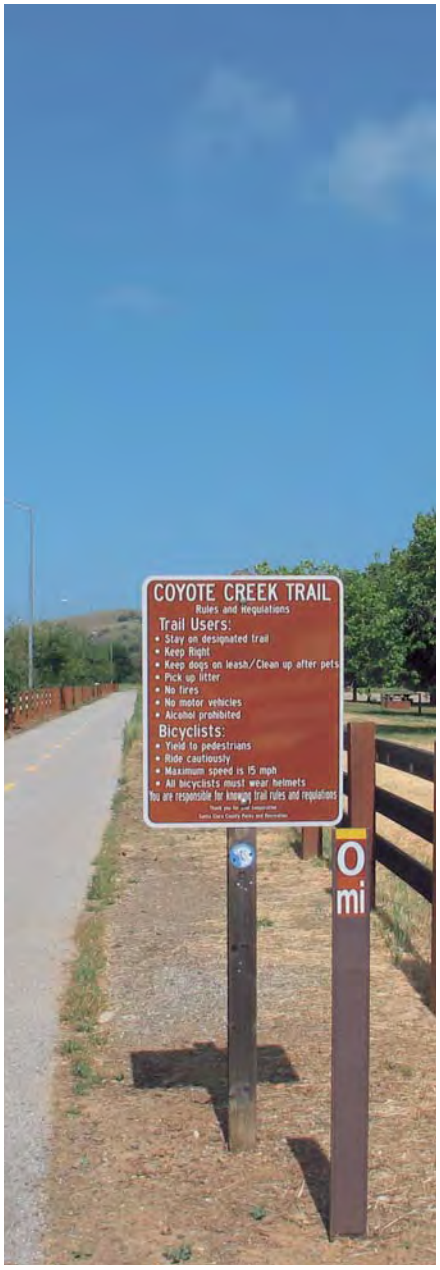


TYPICAL TRAIL ENDING AT PARKING AREA OR CUL-DE-SAC



Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

4.7 SIGNS



ACCESS SIGNS

The first stage of signing for the Citywide Trails Systems will direct the users to access points. This will include signs for parks, staging areas and trailheads. These signs should be visible from major roads.

TRAILHEAD SIGNS

The next stage of signing will be trailhead and trail access point signs. Important trailheads should include the following items: a map of the particular trail of the trail system, destinations and distances, permitted uses on the trail, regulations regarding the land to be accessed, information on hazards such as poison oak or high water during storms, and information on trail conditions and access for disabled persons. The sign may also contain interpretive information on points of historic significance or on the natural history of areas through which the trail passes.

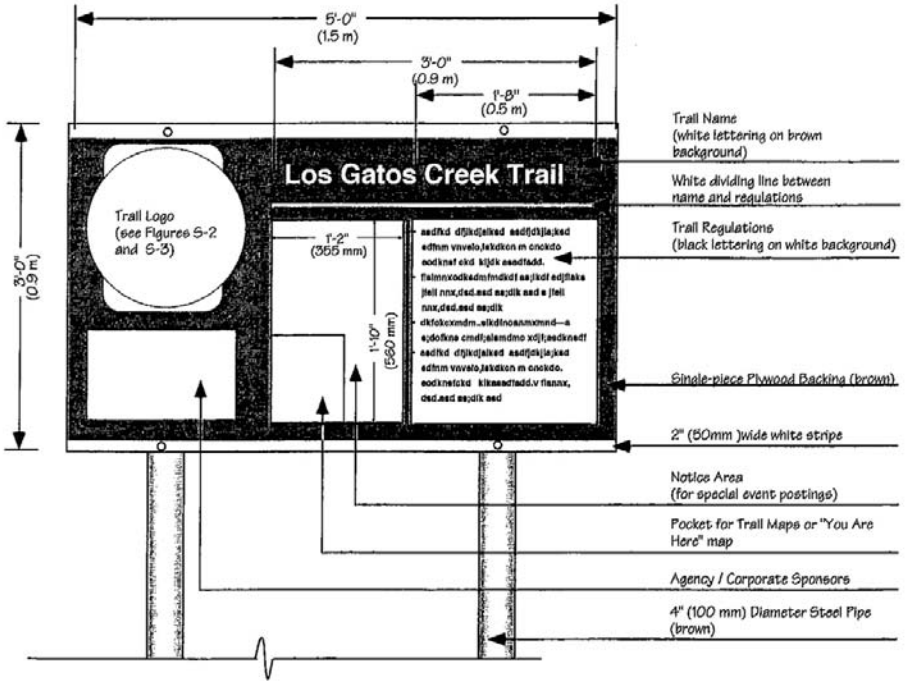
Minor access points along a trail, such as at street crossings, should have signs that provide information regarding regulations, permitted and prohibited trail uses, and hazard warnings. The trail sign post illustrated can provide some of this information and be incorporated into the bollard barrier layout. Reflective tape on the post will illuminate the barriers at night.

TRAIL SIGNS

Sign posts along the trail should include the trail name, directional information (particularly at junctions and trail forks), destination and distance information. Reflective tape at the top of the post can help guide trail users caught out after dark.

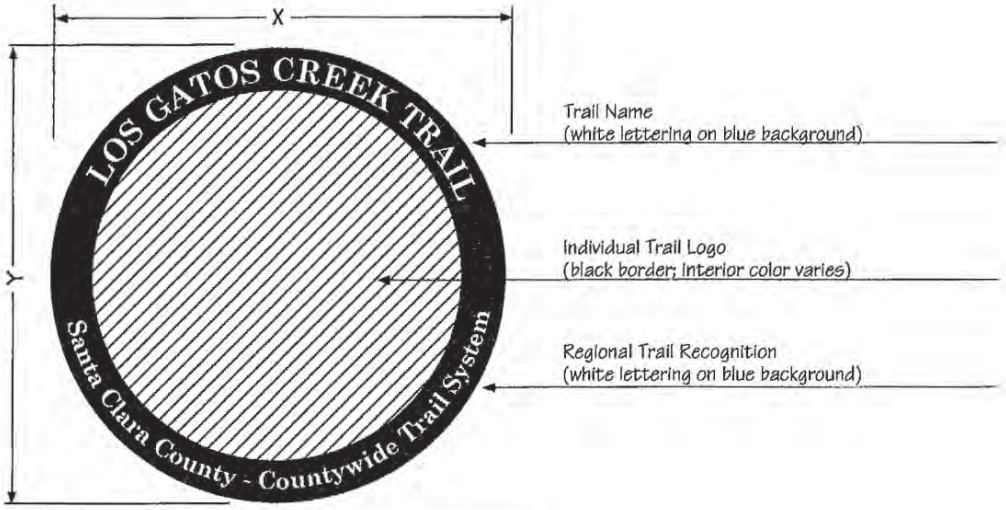
All signs should be designed and built with high quality materials that will be vandal resistant and resistant to weather damage sunlight and water. The sign program should be consistent throughout the Citywide Trails System and should compliment existing sign systems used by County of Santa Clara.

TYPICAL TRAILHEAD SIGN



Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

SUB-REGIONAL TRAIL LOGOS



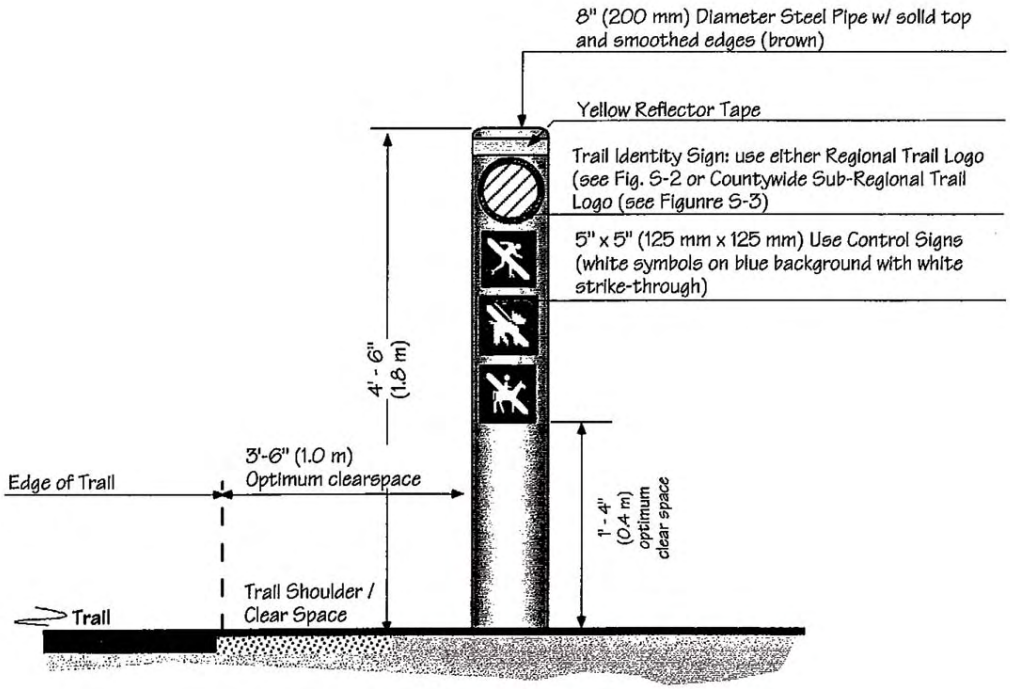
Dimension	Trail Entrance Bollard (See Fig. S-5)	Trail Entrance Sign (See Fig. S-4)
X	3", 4", or 6" (75 mm, 100 mm, or 125 mm)	1'-6" (0.6 m)
Y	3", 4", or 6" (75 mm, 100 mm, or 125 mm)	1'-6" (0.6 m)

Countywide Sub-Regional Trail Routes

- Matadero Creek / Page Mill Trail
- Stevens Creek Trail
- Guadalupe Trail
- Los Gatos Creek Trail
- Coyote Creek / Llagas Creek Trail
- West Valley Trail
- Morgan Hill Cross-Valley Trail
- San Martin Cross-Valley Trail

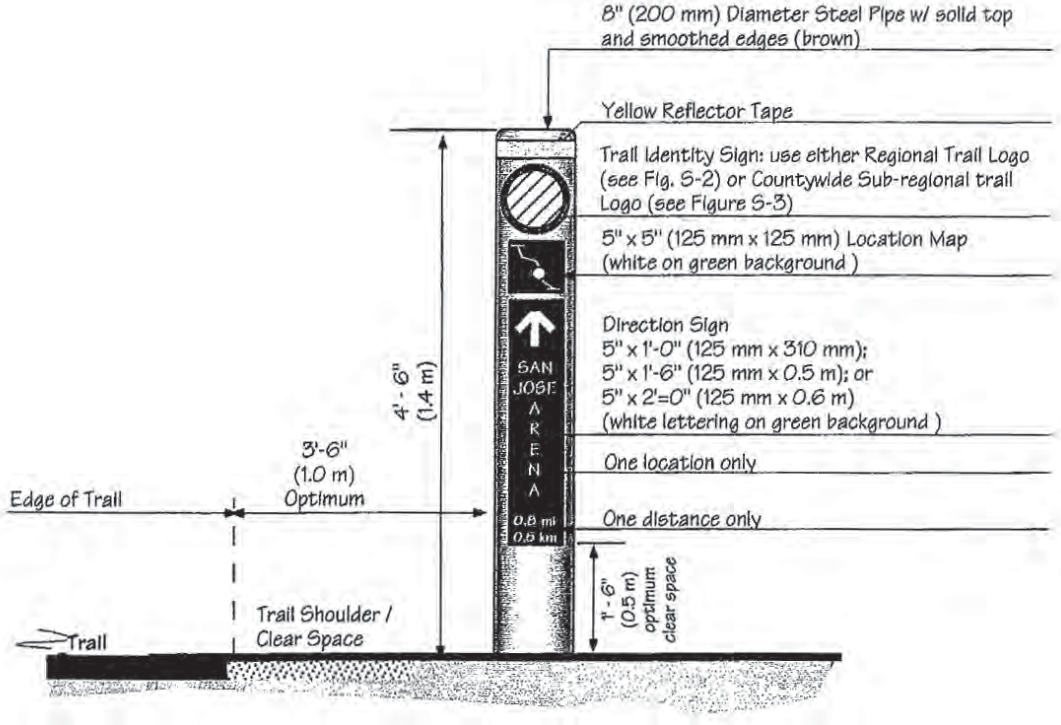
Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL SIGN POST



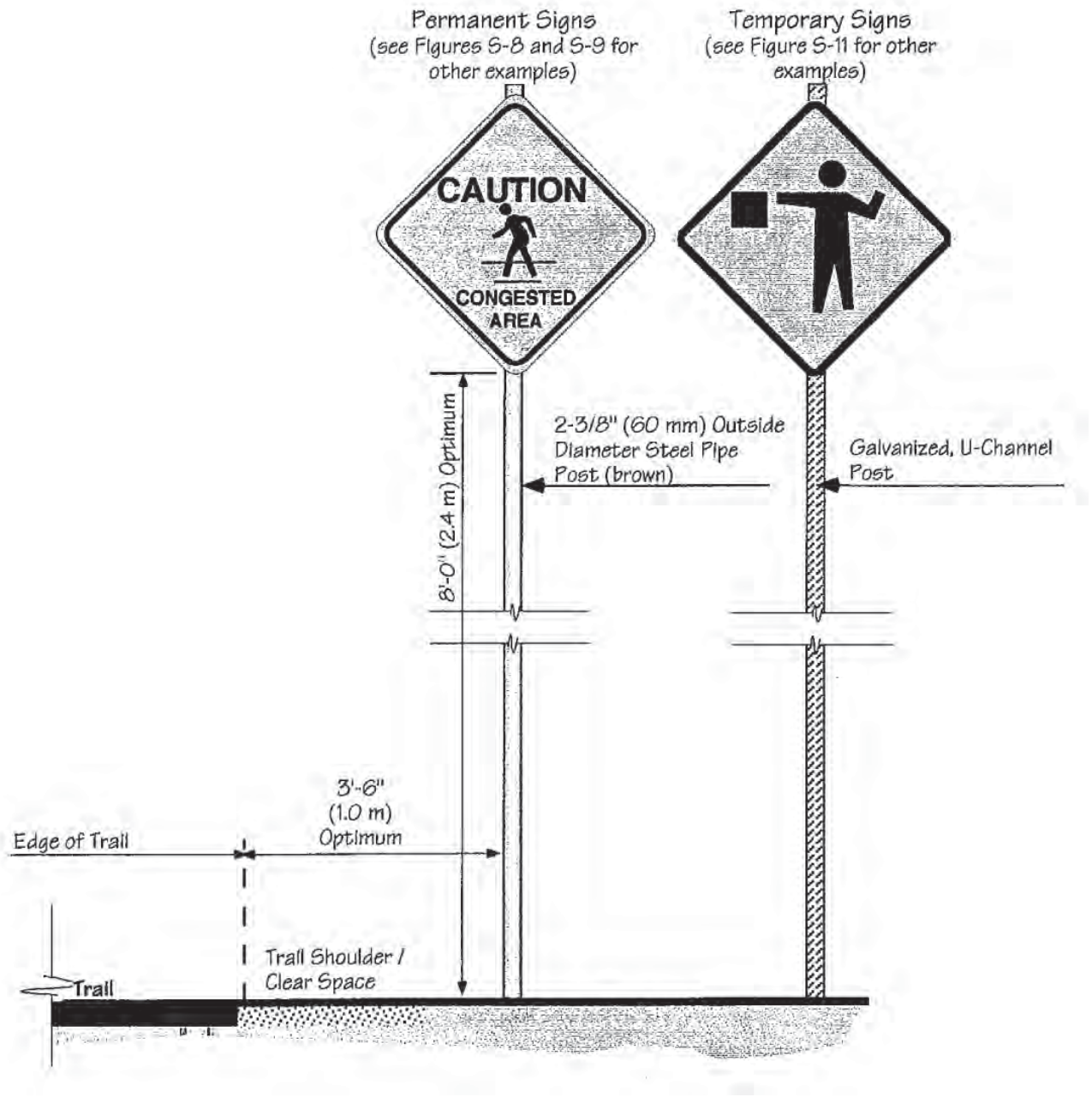
Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL MILE MARKER AND DIRECTION SIGNS



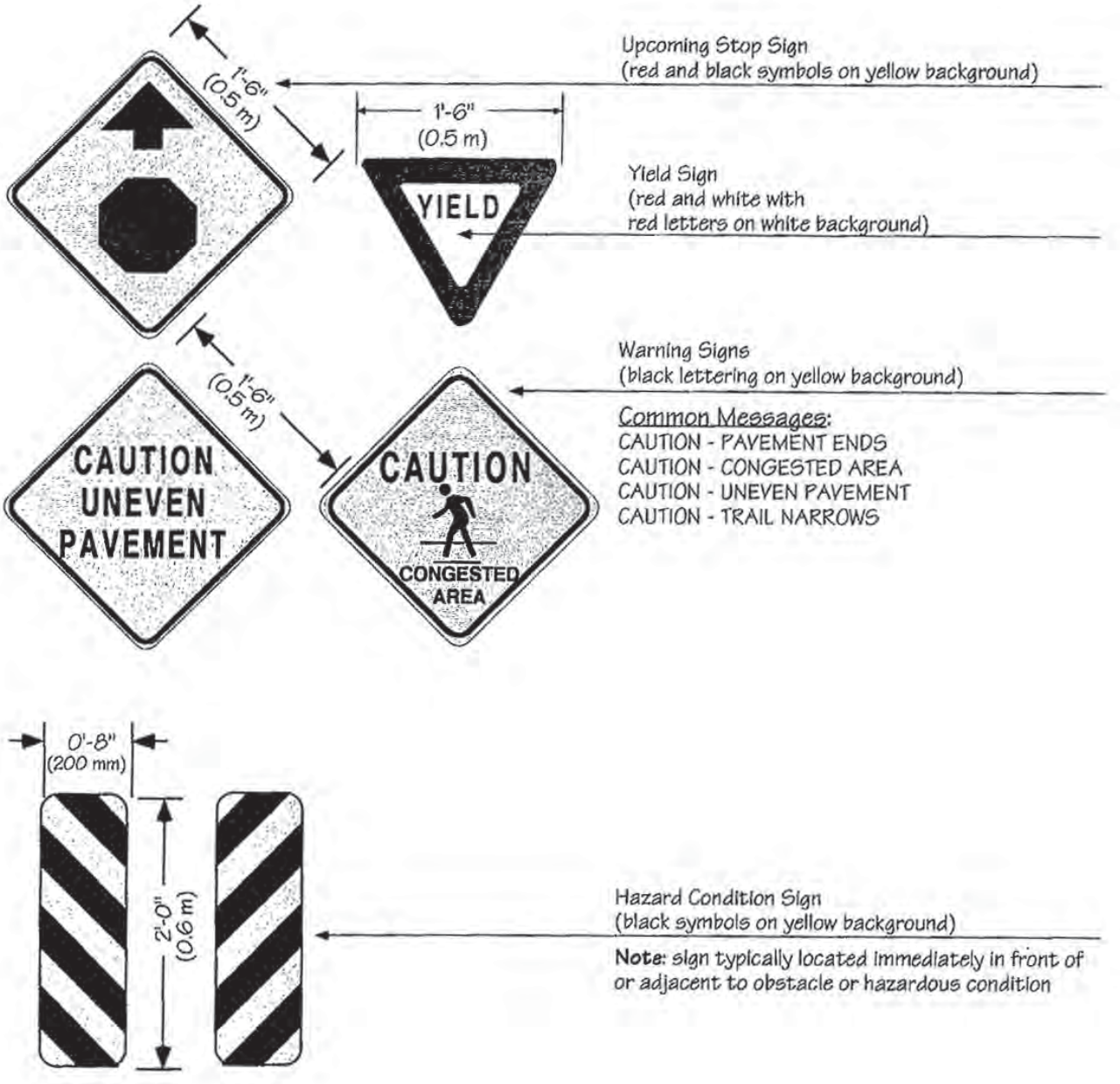
Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL MANAGEMENT SIGN POSTS



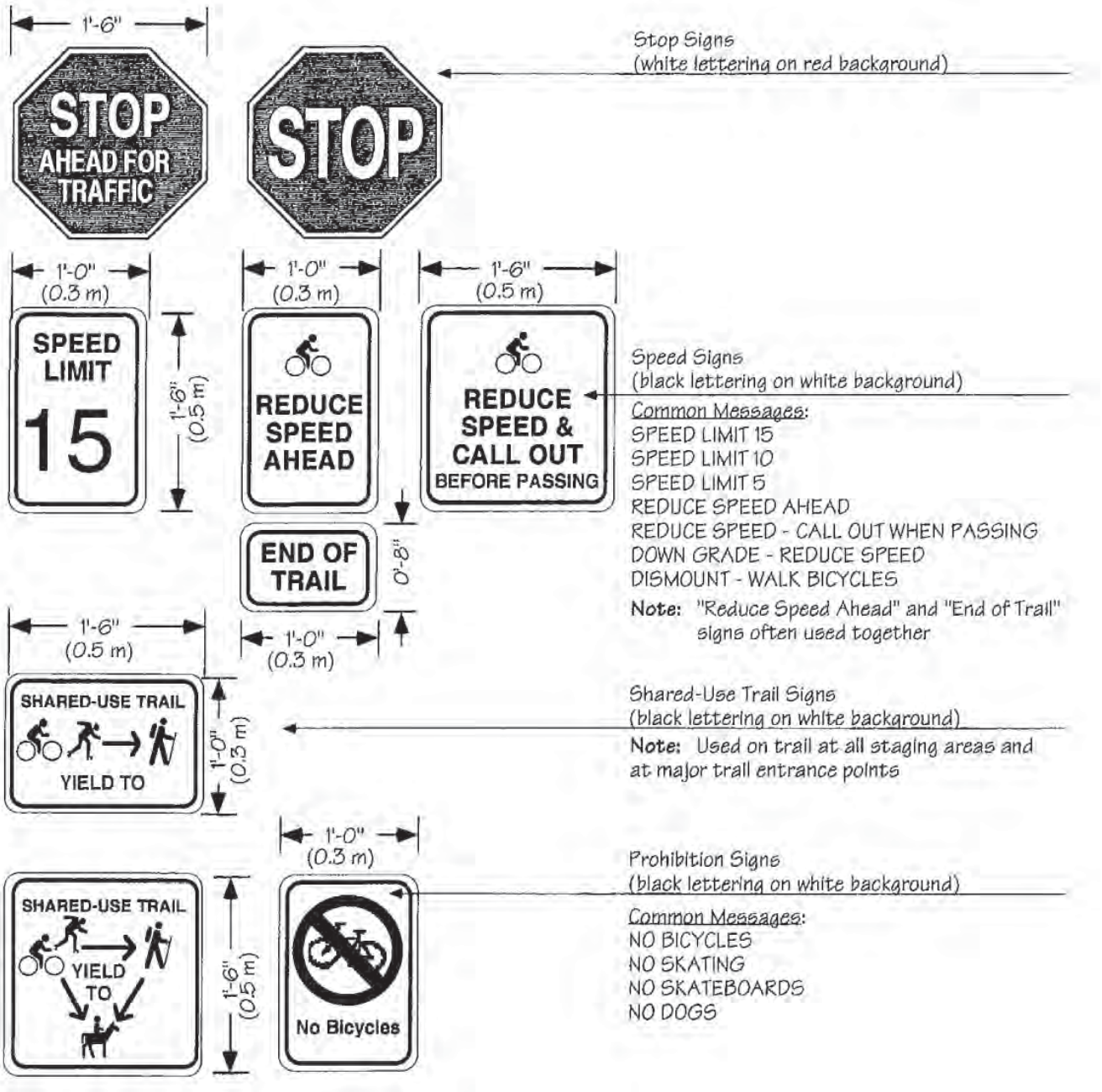
Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL SAFETY SIGNS



Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL REGULATORY SIGNS



Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TEMPORARY SIGNS

Construction / Maintenance Signs
(black lettering / symbols on orange background)

Common Messages:
TRAIL WORK AHEAD
SURVEY CREW AHEAD
BE PREPARED TO STOP
TRAIL TEMPORARILY CLOSED (see also Guideline UM - 1.4.4)

Temporary Condition / Closure Signs
(yellow lettering and black background / black lettering on yellow background)

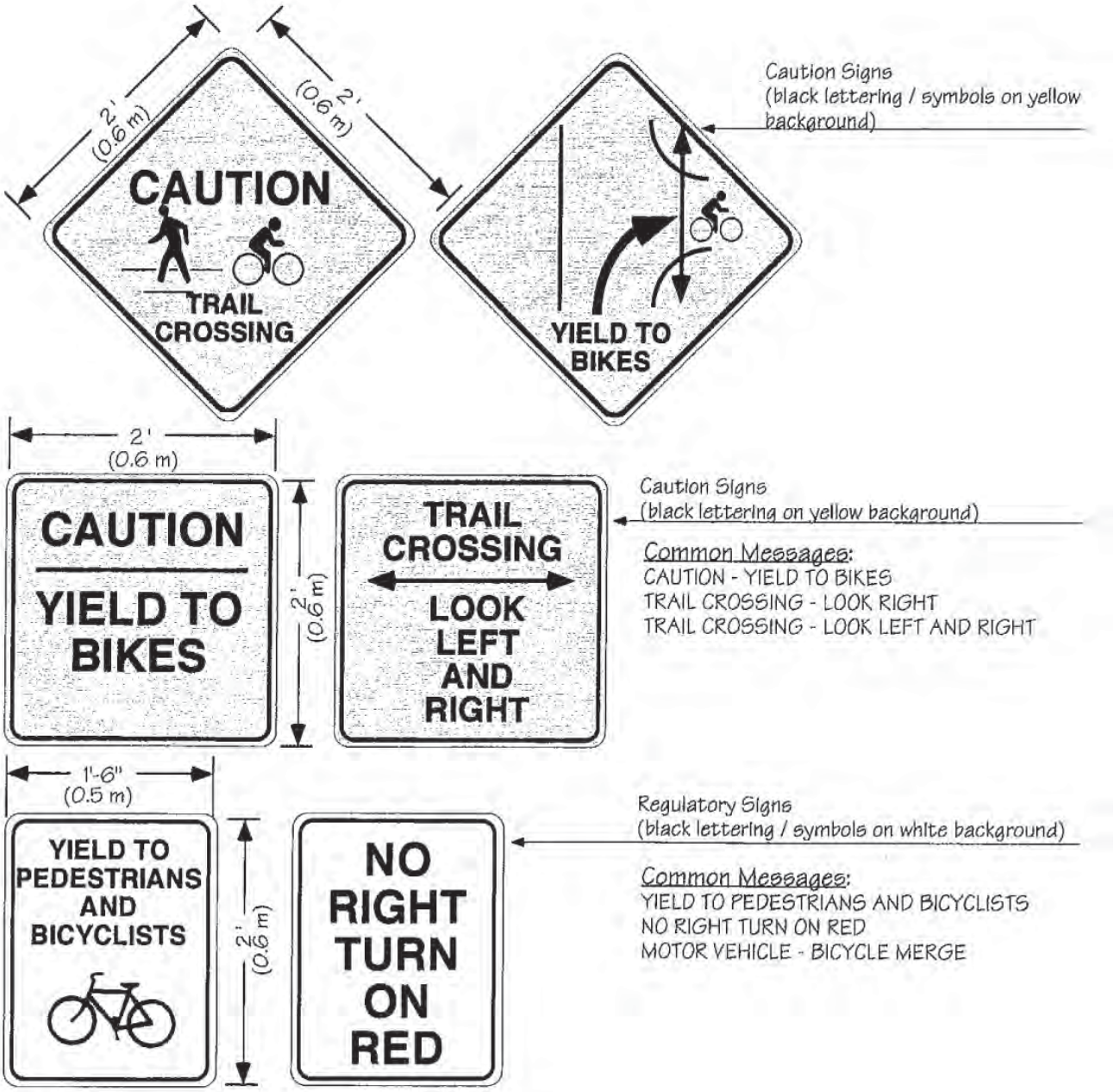
Common Messages:
CAUTION - STORM DAMAGED TRAIL
CAUTION - STAY ON TRAIL

Closure Signs
(whitelettering on red background / red lettering and white background)

Common Messages:
NOTICE - TEMPORARILY CLOSED FOR WILDLIFE NESTING
NOTICE - TRAIL CLOSED FOR FLOODING

Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

ROADWAY REGULATORY AND SAFETY SIGNS



Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

4.8 TRAIL STRUCTURES

BOLLARDS AND ENTRY STRUCTURE

Entry structures using bollards are placed at trail access points to separate the trail from motor vehicles and to slow bicycles as they approach street crossings. A gate may be provided where service access is needed. The diagonal layout of bollards will make the space between the bollards appear narrower, slowing bicycles and deterring motorcyclists from entering the trail. The bollards are spaced to provide access by people using wheelchairs. A trail sign post can be incorporated into the bollard layout.

SELF CLOSING TRAIL GATE

A self closing trail gate with latch should be used on open space trails where live-stock is present and stiles are not appropriate.

MOTORCYLCE BARRIER

The barrier made of logs can be placed at open-space trail access points to prevent access by motorcycles, but allow hikers, equestrians and mountain bicyclists to pass. This barrier should not be used on paved trails, bicycle paths or on open space trails accessible to persons using wheelchairs.

BRIDGES

Bridges will be required wherever trails cross creeks. There are many possibilities for bridge designs. The most simple designs utilize prefabricated bridges made from self-weathering steel with wood decks (see drawing). Openings between railings should be 6” maximum. On bridges with equestrian use, railings should be 54” high.

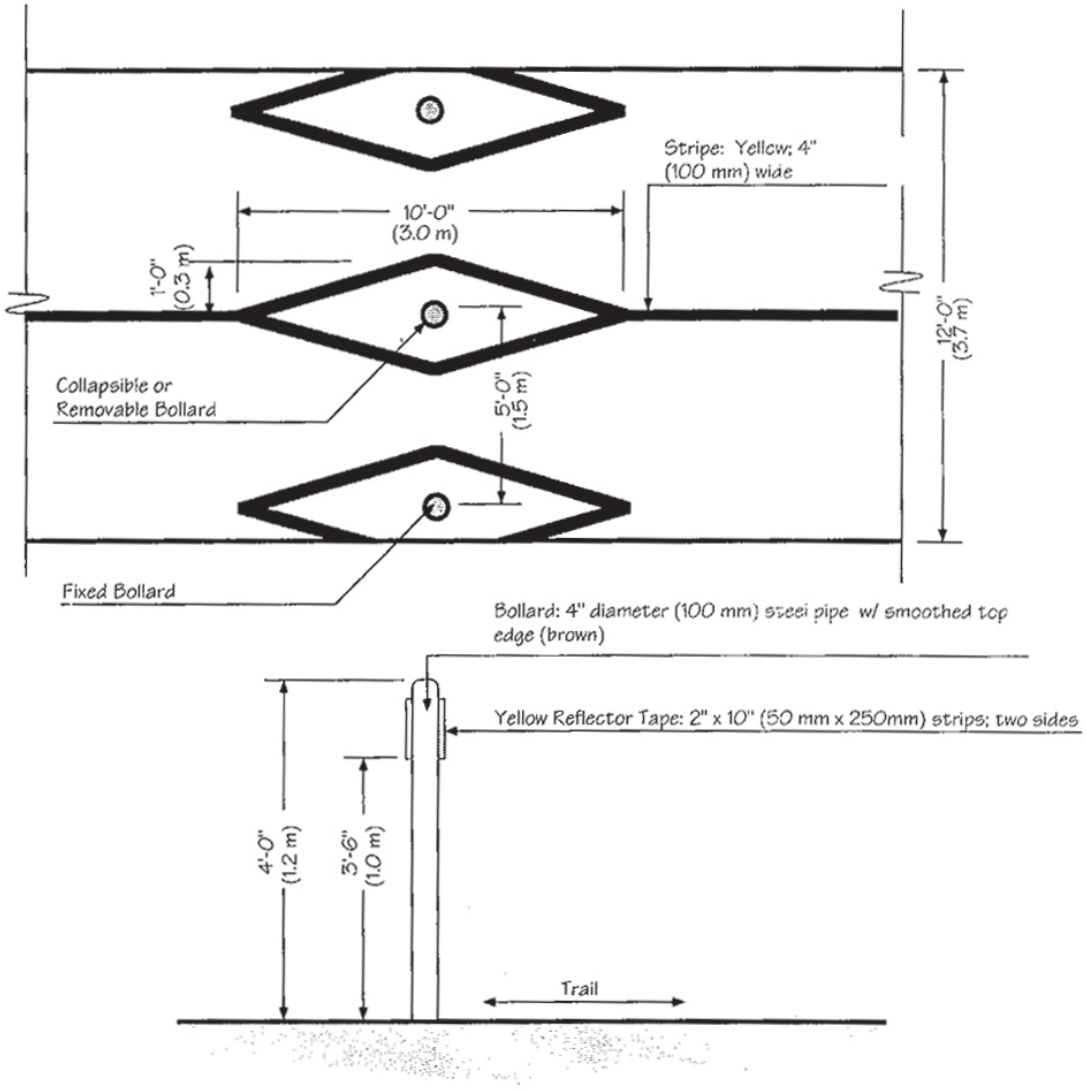
HIKING STILES

Open space trails may travel through fenced grazing or cultivated land. Stiles allow hikers to pass over or through fences without damaging them and without using gates that people may neglect to close. Stiles also prevent passage by motorcycles and equestrians on trails that prohibit those uses. Stiles should not be used on trails accessible to persons using wheelchairs.

TRAIL FENCES AND SCREEN FENCES

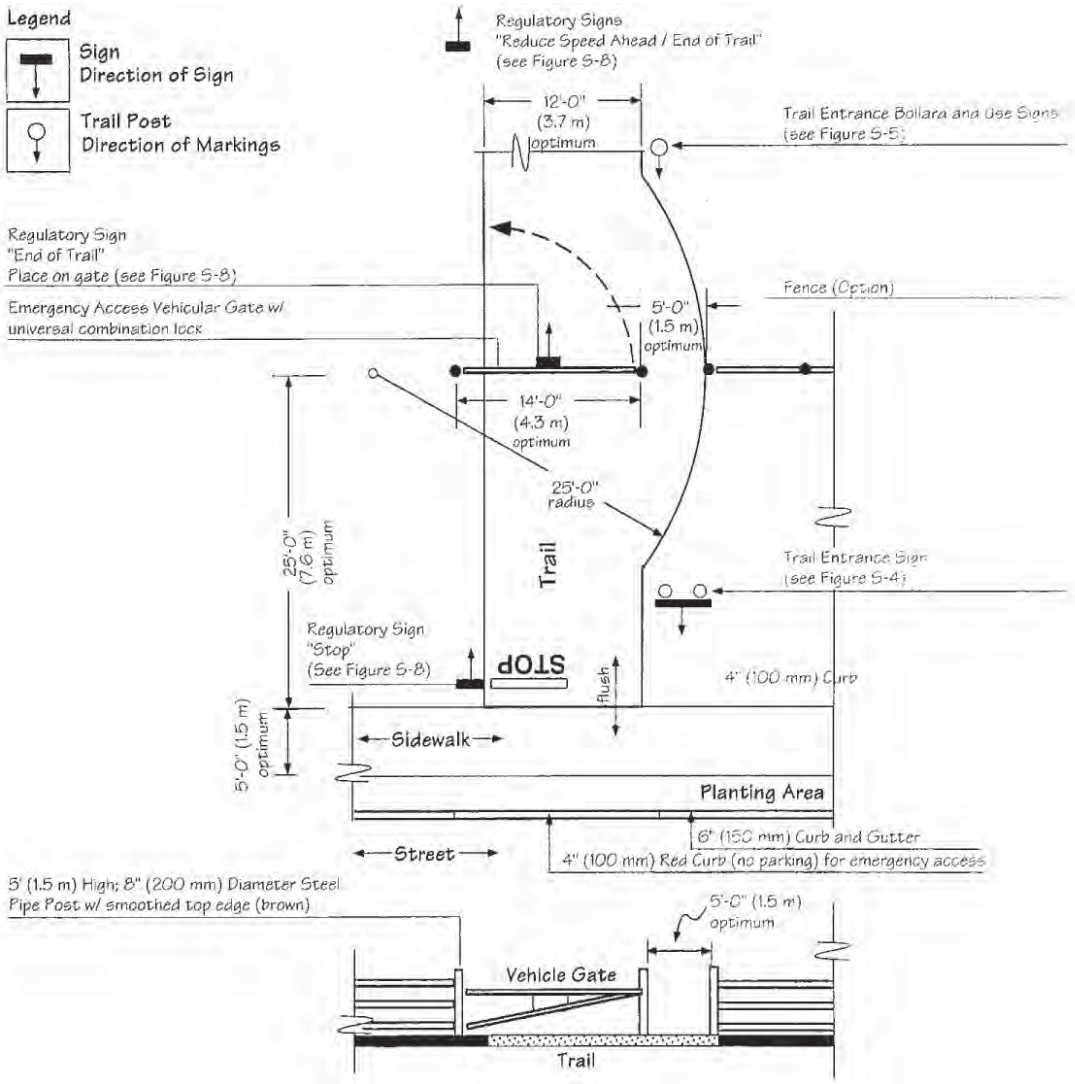
Fencing may be necessary on some trails to prevent trail users from trespassing on adjacent lands, to contain grazing animals, or to protect the use from dangerous areas. In areas where private residences are passed, privacy may be a concern. Screen fences should be used to maintain privacy of residents. Screen fences can be made of wood, concrete block or chain link if combined with vine planting. Fences unused to contain livestock should minimize the use of gates that people may neglect to close. Hiking stiles should be used when possible.

TYPICAL TRAIL BARRIER POSTS



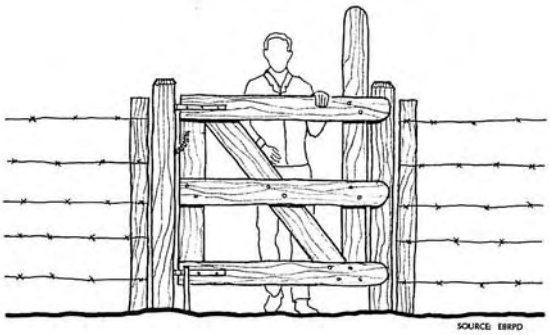
Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

TRAIL ENTRY STRUCTURE

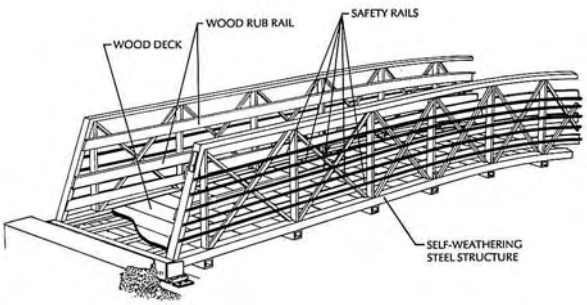


Source: Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, April 1999

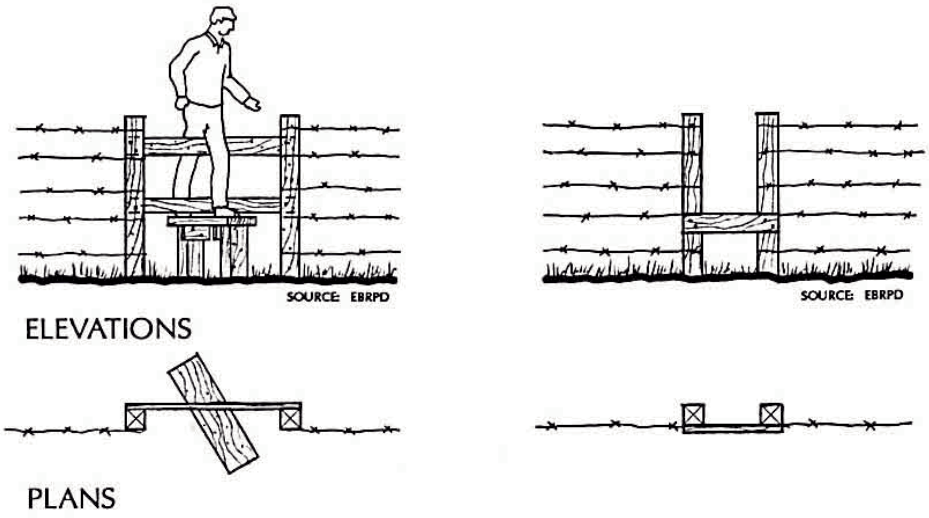
SELF-CLOSING TRAIL GATE



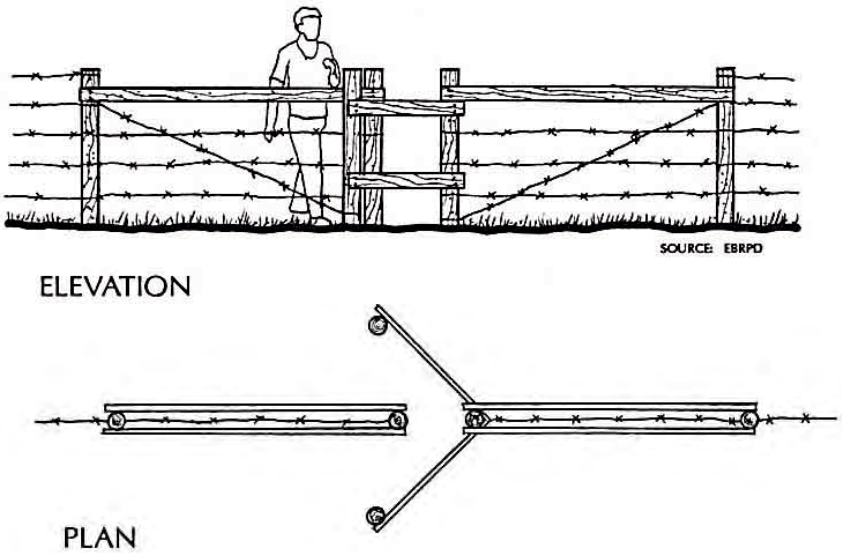
TRAIL BRIDGE



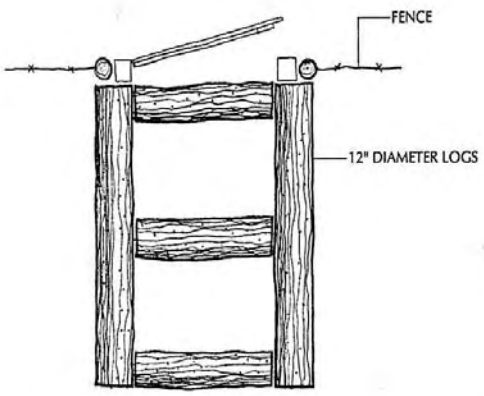
STEP OVER HIKING STILES



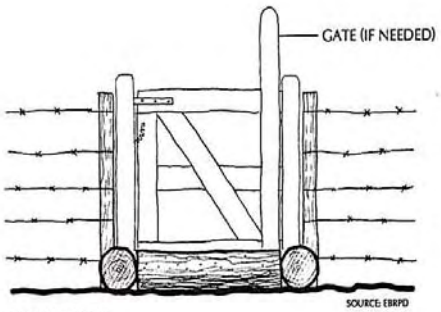
WALK-THROUGH HIKING STILES



MOTORCYCLE BARRIER

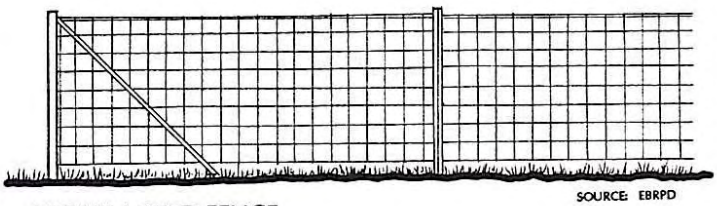


PLAN

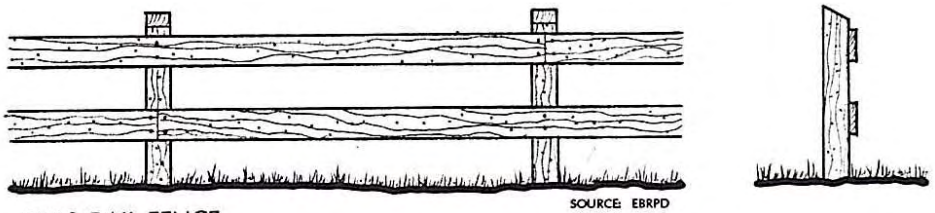


ELEVATION

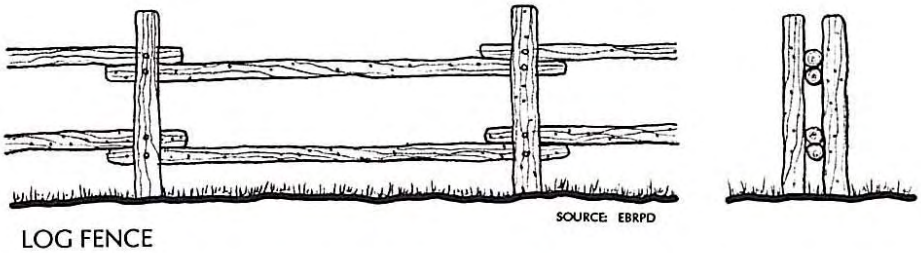
TRAIL FENCES



WOVEN FIELD FENCE



TWO RAIL FENCE



LOG FENCE

IMPLEMENTATION

5. IMPLEMENTATION

The Trails and Natural Resources Study identifies potential trail routes for consideration. The potential routes are based on existing trails, desired connections, and other corridor opportunities such as creeks. This study is the foundation for continuing work on the development of an adopted trails master plan. Additional work needed for a trails master plan includes discussions with private land owners, further confirmation of potential trails, and completion of CEQA compliance documents. In the mean time, individual trail opportunities will arise and should be pursued. Implementation of individual trail segments can occur with further study.

Implementation of trails on private land can be a complicated process. The Santa Clara County Countywide Trails Master Plan addressed the issue of trails on private lands through an extensive planning process that included private land interests. Further planning for Morgan Hill trails should benefit from the County experience. The Countywide Trails Master Plan used the following key points in creating their plan:

- an extensive public planning process
- work with willing landowners to identify realistic trail opportunities
- a thorough process to identify trail need
- policies and criteria for including proposed trails on private land
- policies and guidelines for trail development.

5.1 PROJECTED COSTS

The projected costs for implementing trail projects will vary greatly depending on the program for each project. Costs for the trail itself will vary depending on width, materials, and other factors. Other costs for staging areas, drainage features, amenities such as benches and signs, fencing, landscaping and other features will vary from project to project. In addition to construction costs, total project cost will also include design and construction management. For budgeting, project costs can be distributed as follows: 25% design and project management, 50% construction costs, and 25% construction management. Projects in the planning phase should carry a significant design contingency (30% during planning stage) and a 10% construction contingency.

Sample costs for trail projects:

Unpaved trails – 3'-5' wide, native soil or bark
$9-$15/lf

Improved trails – 6'-8' wide, compacted granular surface
$72-$96/lf

Paved trails – 10'-12' wide, asphalt
$180-$216/lf

Maintenance Costs:
Once the trails are built, they need constant maintenance by public agencies. These maintenance costs should be addresed, considered, and budgeted for during the planning and design phases. Infrastructure bond measures, the State Fund, and incorporating the trails into paving management plans are three possibilities for identifying sources of maintenance funds.

5.2 PRIORITIES

Priority trail projects will largely be determined by opportunities that arise through development proposals. Otherwise, priorities for trail projects should include the following factors:
- major corridor trails
- trails that improve safety including improved access to schools and parks, and remove conflicts between cars and pedestrians.
- trails that fill gaps in the trail system
- trails that provide connections to other community facilities, transportation connections, and downtown.

5.3 POTENTIAL FUNDING SOURCES

Funding for trail projects will come from a variety of sources. Priority trail projects should be placed on the City's Capital Improvement Program (CIP). Some trails may be funded by developers as part of planned developments, or through development fees paid to the City. Other potential sources of funding include:

- Municipal programs including local bond measures, developer fees, and general fund
- State funding through programs for recreational trails, parks, transportation projects, hazard elimination, and congestion management/air quality
- Federal funding programs including transportation enhancements
- Foundation grant programs
- Safe Routes to Schools